Metadata for Wupatki National Monument, Spatial Vegetation Data: Cover type / Association level of the National Vegetation Classification System

Identification_Information:
  Citation:
    Citation_Information:
      Originator: USBR Remote Sensing and GIS Group, Denver, Colorado
      Publication_Date: 2004
      Title: Vegetation Map: Wupatki National Monument
      Geospatial_Data_Presentation_Form: vector digital data
      Online_Linkage: http://biology.usgs.gov/npsveg/wupa/index.html#geospatial_veg_info
      Larger_Work_Citation:
        Citation_Information:
          Originator: M. Hansen, J. Coles, K.A. Thomas, D. Cogan, M. Reid, J. Von Loh, K. Schultz
          Publication_Date: 2004
          Title: USGS-NPS National Vegetation Mapping Program: Wupatki National Monument, Arizona, Vegetation Classification and Distribution, Final Project Report
          Geospatial_Data_Presentation_Form: report
  Description:
    Abstract: This metadata is for the vegetation and land-use geo-spatial database for Wupatki National Monument and surrounding areas. The project is authorized as part of the USGS/NPS Vegetation Mapping Program. The program is being administered by the Biological Resources Division (BRD), United States Geological Survey (USGS). The USGS/BRD is responsible for overall management and oversight of all ongoing mapping efforts. This mapping effort was performed by the US Bureau of Reclamation's (USBR) Remote Sensing and GIS Group, Technical Service Center, Denver, CO and the USGS Colorado Plateau Research Station, Flagstaff, AZ. The vegetation mapping program is part of a larger Inventory and Monitoring (I&M) program started by the National Park Service (NPS).
    Purpose: The purposes of the mapping effort are varied and include the following: Provides support for NPS Resources Management; Promotes vegetation-related research for both NPS and USGS/BRD; Provides support for NPS Planning and Compliance; Adds to the information base for NPS Interpretation; and Assists in NPS Operations. The NPS I&M goals are, among others, to map the vegetation of all national parks and monuments and provide a baseline inventory of vegetation.
  Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 19960603
    Currentness_Reference: Date of Aerial Photography
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None planned
  Spatial_Domain:
    Description_of_Geographic_Extent: Wupatki National Monument and the environs.
    Bounding_Coordinates:
      West_Bounding_Coordinate: -111.555810
      East_Bounding_Coordinate: -111.249648
      North_Bounding_Coordinate: 35.658845
      South_Bounding_Coordinate: 35.480134
  Keywords:
    Theme:
      Theme_Keyword_Thesaurus: None
      Theme_Keyword: Land Cover
      Theme_Keyword: Land Use

Theme_Keyword: Vegetation
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: Arizona
Place_Keyword: United States
Place_Keyword: USA
Place_Keyword: North America
Place_Keyword: Flagstaff Area Monuments
Place_Keyword: National Park Service
Place_Keyword: Wupatki National Monument
Access_Constraints: None
Use_Constraints: Acknowledgment of the USGS and USBR/RSGIG would be appreciated in products derived from these data. Any person using the information presented here should fully understand the data collection and compilation before beginning analysis. The burden for determining fitness for use lies entirely with the user.
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Dan Cogan and Kathryn Thomas
Contact_Organization:
USBR Remote Sensing and GIS Group and USGS Southwest Biological Science Center
Colorado Plateau Research Station
Contact_Position: Cogan: Physical Scientist; Thomas: PhD Ecologist
Contact_Address:
Address_Type: mailing and physical address
Address: Cogan: POB 25007 Bldg 56 D-8260 Denver Federal Center Denver, CO 80225; Thomas: USGS Southwest Biological Science Center Colorado Plateau Research Station P.O. Box 5614 Flagstaff, Arizona 86011
City: Denver
State_or_Province: CO
Postal_Code: 80225
Country: USA
Contact_Voice_Telephone: Cogan: 303-445-2291 Thomas: 928-556-7327
Contact_Facsimile_Telephone: 303-445-6337
Contact_Electronic_Mail_Address: dcogan@do.usbr.gov; kathryn_a_thomas@usgs.gov
Hours_of_Service: 8:00 - 5:00 MST
Contact_Instructions: For GIS questions contact Cogan, for ecological questions contact Thomas.
Browse_Graphic:
Browse_Graphic_File_Name: http://biology.usgs.gov/npsveg/wupa/images/wupaveg.jpg
Browse_Graphic_File_Description: 654 kbyte file showing vegetation associations
Browse_Graphic_File_Type: JPG
Data_Set_Credit: USBR: Janet Coles, Jim Von Loh, Dan Cogan, Doug Crawford, Trudy Meyer, Jean Pennel. USGS: Kathryn Thomas, Monica Hansen
Native_Data_Set_Environment: Microsoft Windows 2000 Version 5.0 (Build 2195) Service Pack 4; ESRI ArcCatalog 8.2.0.700
Taxonomy:
Keywords/Taxon:
Taxonomic_Keyword_Thesaurus: None
Taxonomic_Keywords: plant communities
Taxonomic_Classification:
Taxon_Rank_Name: Kingdom
Taxon_Rank_Value: Plantae

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report: These data have and overall accuracy of 92.2% (91.8% Kappa Index) within a 90% confidence interval of 91.1 to 93.3%
Logical_Consistency_Report: All polygon features were checked for topology, existence of label points, and label point

uniqueness. The labels were checked for correct and complete attributing. All nodes where checked for unintentional lines and to ensure that the polygons were closed. All steps preformed using ESRI ArcInfo commands.

Completeness_Report: All data that could be interpreted from the aerial photos were digitized in accordance with the minimum mapping unit (MMU) of 1/2 hectare. This included selected features that fell into the National Vegetation Classification and the Anderson Level II land use classification. Some classes below the MMU were included, especially water and wetland features and those at the edge of the study area (i.e. cut off by other features and borders). Roads (to visible right-of-way or fence line) and streams/drainages wider than 10 meters were digitized as polygons and attributed accordingly.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report: Data were transferred to the GIS database using 1:12,000-scale USGS Digital Orthophoto Quarter Quadrangles (DOQQs) as basemaps. As such, the positional accuracy is no better than these products.
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: Data were transferred to the GIS database using 1:12,000-scale USGS Digital Orthophoto Quarter Quadrangles (DOQQs) as basemaps. As such, the positional accuracy is no better than these products.

Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USDA - National Forest Service (BY: Merrick & Company 2450 S. Peoria St Aurora, CO 80014 Phone: 303-751-0741)
Publication_Date: 19960603
Title: USDA - USFS Photos (Merrick & Company)
Geospatial_Data_Presentation_Form: aerial photos
Source_Scale_Denominator: 12000
Type_of_Source_Media: Color Infra-red aerial photos
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 19960603
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: National Forest Serivce Photos
Source_Contribution: Photos used for vegetation interpretation.
Process_Step:
Process_Description:
PHOTO INTERPRETATION: All map classes were interpreted from 1:12,000 scale, color infra-red photography flown in June 1996. The photographs were acquired from the USGS/NPS mapping program. Photo-interpretation used the standard identification features such as tone, texture, color, pattern, topographic position, and shadow. In addition, field sample locations and their vegetation descriptions aided in assigning map classes to each polygon. Photographs were examined using a stereoscope as needed. Linework was created on semi-clear mylars placed over the photos. Due to the poor quality of the photography, additional mapping was performed on the ground using GPS and known landmarks as guides.

GIS PROCEDURES: The linework on the mylar overlays was transferred into the GIS database by one of two methods, either heads-up digitizing or scanning. METHOD I: Heads-up digitizing is a procedure whereby the operator digitizes by hand on a computer terminal screen showing a digital image of a DOQQ. By looking at similar features on both the aerial photograph and on the DOQQ, the line drawn on the aerial photo overlay is manually transferred to the digital image. METHOD II: Most of SUCR was transferred by digitally scanning the mylar overlays, vectorizing the scanned images, and fitting the resulting linework to corresponding DOQQs using known control points. Extensive cleaning, edge matching, and general editing of the digital vectors was completed before polygon topology was created. Labels were created for each polygon and they were attributed with the necessary vegetation information. The entire transfer and editing sequence was automated via in-house ArcInfo AML programs. The final vegetation coverage consists of vegetation polygons.

OTHER DATA: Quadrangle and DOQQ border coverages (bndryquad, bndrydoqq) were created by producing tics every 2?30"" and 3' 45"" respectivley and connecting arcs at the tics. The mapping project border coverage (bndryproj) was created by creating a 1-mile buffer around the Monument border and modifying it per the client's request to include additional areas of interest that fell further than 1 mile beyond the border. The Monument border coverage (bndrypark) was acquired from the client. A flightline coverage (bndryfline) was made by digitizing arcs with a DRG on screen and following lines as they appeared on the flightline index map. An aerial photos polygon coverage (bndryphotos) (aerial photos used for photo interpretation) was made by digitizing around the vegetation coverage label points highlighted to show photo number.

Process_Date: 2000-2003
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Dan Cogan and Kathryn Thomas
Contact_Organization:
USBR Remote Sensing and GIS Group and USGS Southwest Biological Science Center
Colorado Plateau Research Station
Contact_Position: Cogan: Physical Scientist; Thomas: PhD Ecologist
Contact_Address:
Address_Type: mailing and physical address
Address: Cogan: POB 25007 Bldg 56 D-8260 Denver Federal Center Denver, CO 80225; Thomas: USGS Southwest Biological Science Center Colorado Plateau Research Station P.O. Box 5614 Flagstaff, Arizona 86011
City: Denver
State_or_Province: CO
Postal_Code: 80225
Country: USA
Contact_Voice_Telephone: Cogan: 303-445-2291 Thomas: 928-556-7327
Contact_Facsimile_Telephone: 303-445-6337
Contact_Electronic_Mail_Address: dcogan@do.usbr.gov; kathryn_a_thomas@usgs.gov
Hours_of_Service: 8:00 - 5:00 MST
Contact_Instructions: For GIS questions contact Cogan, for ecological questions contact Thomas.

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 15278
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label point
Point_and_Vector_Object_Count: 6197
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
Point_and_Vector_Object_Count: 6197
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Point
Point_and_Vector_Object_Count: 100

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 12
Transverse_Mercator:
Scale_Factor_at_Central_Meridian: 0.999600

Longitude_of_Central_Meridian: -111.000000
Latitude_of_Projection_Origin: 0.000000
False_Easting: 500000.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate pair
Coordinate_Representation:
Abscissa_Resolution: 0.000016
Ordinate_Resolution: 0.000016
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: wupa_veg.aat
Entity_Type_Definition: Wupatki National Monument Vegetation Mapping Project: Vegetation Coverage Arc Attribute Table
Entity_Type_Definition_Source: User defined
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.
Attribute:
Attribute_Label: FNODE#
Attribute_Definition: Internal node number for the beginning of an arc (from-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: TNODE#
Attribute_Definition: Internal node number for the end of an arc (to-node).
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LPOLY#
Attribute_Definition: Internal node number for the left polygon.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: RPOLY#
Attribute_Definition: Internal node number for the right polygon.

Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: LENGTH
Attribute_Definition: Length of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute_Label: WUPA_VEG#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: WUPA_VEG-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Whole numbers that are automatically generated.
Attribute:
Attribute_Label: DIGTYPE
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Represents lines that were drawn using heads-up digitizing
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Represents scanned lines that were smoothed.
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Represents lines that are the project boundary.
Enumerated_Domain_Value_Definition_Source: User Defined
Detailed_Description:
Entity_Type:
Entity_Type_Label: wupa_veg.pat
Entity_Type_Definition: Wupatki National Monument Vegetation Mapping Project: Vegetation Coverage Polygon Attribute Table
Entity_Type_Definition_Source: User defined
Attribute:
Attribute_Label: FID
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: Shape
Attribute_Definition: Feature geometry.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Coordinates defining the features.

Attribute:
Attribute_Label: AREA
Attribute_Definition: Area of feature in internal units squared.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated in sqaured meters.
Attribute:
Attribute_Label: PERIMETER
Attribute_Definition: Perimeter of feature in internal units.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers that are automatically generated in meters.
Attribute:
Attribute_Label: WUPA_VEG#
Attribute_Definition: Internal feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute_Label: WUPA_VEG-ID
Attribute_Definition: User-defined feature number.
Attribute_Definition_Source: ESRI
Attribute_Domain_Values:
Unrepresentable_Domain: Sequential whole numbers that are automatically generated.
Attribute:
Attribute_Label: COMMENT_1
Attribute_Definition: General description of the map unit.
Attribute_Definition_Source: USGS Colorado Plateau Research Station
Attribute_Domain_Values:
Unrepresentable_Domain: Text
Attribute:
Attribute_Label: COMMENT_2
Attribute_Definition: General comment describing how the map unit relates to other map units.
Attribute_Definition_Source: USGS Colorado Plateau Research Station
Attribute_Domain_Values:
Unrepresentable_Domain: Text
Attribute:
Attribute_Label: DENSITY
Attribute_Definition: Density range for the overstory of the woodland and forest map units.
Attribute_Definition_Source: USGS and USBR Remote Sensing and GIS Group
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: <10%
Enumerated_Domain_Value_Definition: Less than 10% tree cover in the overstory (sparse).
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 10-25%
Enumerated_Domain_Value_Definition: Tree cover is between 10 and 25% in the overstory.
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 25-75%
Enumerated_Domain_Value_Definition: Tree cover is between 25 and 75% in the overstory.
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 75-100%
Enumerated_Domain_Value_Definition: More than 75% tree cover in the overstory (dense).

Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: <10%
Enumerated_Domain_Value_Definition: Less than 10% tree cover in the overstory (sparse).
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: N/A
Enumerated_Domain_Value_Definition: Density not applicable, this map unit is not a woodland or forest unit.
Enumerated_Domain_Value_Definition_Source: User Defined
Attribute:
Attribute_Label: ECO
Attribute_Definition: Ecological description of the polygon
Attribute_Definition_Source: USGS Colorado Plateau Research Station
Attribute_Domain_Values:
Unrepresentable_Domain: Text
Attribute:
Attribute_Label: ELCODE
Attribute_Definition: NVCS Association code - Community Element Gobal Code
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: FORMATION
Attribute_Definition: NVCS Formation Name
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: GROUP
Attribute_Definition: NVCS Group Name(s) and Code(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: LUC_II
Attribute_Definition: Land use and land cover (Level II) classification system code and name for the polygon.
Attribute_Definition_Source: Anderson, J.R., E.E. Hardy, J.T. Roach, R.E. Witmer. 1976. Land use and land cover classification system for use with remote sensor data. USGS Professional Paper 964
Attribute_Domain_Values:
Unrepresentable_Domain: Level II Code and Text
Attribute:
Attribute_Label: MAP_CODE
Attribute_Definition: Map Unit Code
Attribute_Definition_Source: USGS and USBR Remote Sensing and GIS Group
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Cinder Barren
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:

Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Basalt Outcrop Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 3
Enumerated_Domain_Value_Definition: Active River Channel
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: Mound Saltbush Badlands Sparse Vegetation
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 5
Enumerated_Domain_Value_Definition: Moenkopi Sandstone Sparse Vegetation
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 6
Enumerated_Domain_Value_Definition: Moenkopi Shale Sparse Vegetation
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 7
Enumerated_Domain_Value_Definition: Sand Bluestem Grassland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 8
Enumerated_Domain_Value_Definition: Black Grama Grassland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 9
Enumerated_Domain_Value_Definition: Needle-and-Thread Grassland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 10
Enumerated_Domain_Value_Definition: Galleta Grassland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 11
Enumerated_Domain_Value_Definition: Galleta Mixed Grasslands
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 12
Enumerated_Domain_Value_Definition: Crinklemat / Alkali Sacaton Dwarf Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 13
Enumerated_Domain_Value_Definition: Snakeweed / Galleta Grassland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 14
Enumerated_Domain_Value_Definition: Galleta Mixed Shrublands
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 15
Enumerated_Domain_Value_Definition: Crispleaf Buckwheat Cinder Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:

Enumerated_Domain_Value: 16
Enumerated_Domain_Value_Definition: Black Grama Coconino Plateau Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 17
Enumerated_Domain_Value_Definition: Rabbitbrush Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 18
Enumerated_Domain_Value_Definition: Fourwing Saltbush Upland Drainageways
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 19
Enumerated_Domain_Value_Definition: Sand Sagebrush Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 20
Enumerated_Domain_Value_Definition: Mormon Tea Cinder Dune Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 21
Enumerated_Domain_Value_Definition: Apache Plume Cinder Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 22
Enumerated_Domain_Value_Definition: Frosted Mint Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 23
Enumerated_Domain_Value_Definition: Unclassified Mixed Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 24
Enumerated_Domain_Value_Definition: Wupatki Wash System
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 25
Enumerated_Domain_Value_Definition: Sandbar Willow Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 26
Enumerated_Domain_Value_Definition: Little Colorado River Invasive Riparian Shrubland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 27
Enumerated_Domain_Value_Definition: Oneseed Juniper Woodland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 28
Enumerated_Domain_Value_Definition: Fremont Cottonwood Woodland
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 29
Enumerated_Domain_Value_Definition: Transportation Route
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:

Enumerated_Domain_Value: 30
Enumerated_Domain_Value_Definition: Facilities
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 31
Enumerated_Domain_Value_Definition: Commercial Development
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 32
Enumerated_Domain_Value_Definition: Residential Land
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 33
Enumerated_Domain_Value_Definition: Stock Tanks and Dams
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 34
Enumerated_Domain_Value_Definition: Strip Mines, Quarries and Gravel Pits
Enumerated_Domain_Value_Definition_Source: User Defined
Enumerated_Domain:
Enumerated_Domain_Value: 35
Enumerated_Domain_Value_Definition: Corrals
Enumerated_Domain_Value_Definition_Source: User Defined
Attribute:
Attribute_Label: NVCS_CODE
Attribute_Definition: NVCS Code(s) to the formation level
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: PHOTO
Attribute_Definition: Aerial photo number (flightline-number) from which the polygon was interpreted.
Attribute_Definition_Source: 1:12,000 scale, color infra-red photography flown in June 1996.
Attribute_Domain_Values:
Unrepresentable_Domain: Positive real numbers representing the flightline and aerial photo numbers
Attribute:
Attribute_Label: PHYS
Attribute_Definition: Physiographic description of the polygon
Attribute_Definition_Source: USBR Remote Sensing and GIS Group
Attribute_Domain_Values:
Unrepresentable_Domain: Text
Attribute:
Attribute_Label: SUBCLASS
Attribute_Definition: NVCS Subclass Name(s) and Code(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: SUBGROUP
Attribute_Definition: NVCS Subgroup Name(s) and Code(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:

Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: VEG_NAME
Attribute_Definition: Map Unit Common Name
Attribute_Definition_Source: USGS and USBR Remote Sensing and GIS Group
Attribute_Domain_Values:
Unrepresentable_Domain: Text
Attribute:
Attribute_Label: ALL_CNAME
Attribute_Definition: NVCS Alliance Common Name
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: ALL_NAME
Attribute_Definition: NVCS Alliance Scientific Name(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: ASSN_CNAME
Attribute_Definition: NVCS Association Common Name(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: ASSN_NAME
Attribute_Definition: NVCS Association Scientific Name(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Attribute:
Attribute_Label: CLASS
Attribute_Definition: NVCS Class Name(s) and Code(s)
Attribute_Definition_Source: National Vegetation Classification System
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: National Vegetation Classification System
Codeset_Source: http://www.natureserve.org/explorer/
Overview_Description:
Entity_and_Attribute_Overview: Attributes were either generated by ArcInfo or assigned by the USBR Remote Sensing GIS Group. Attribure values were provided by the USGS Colorado Plateau Research Station and the USBR Remote Sensing GIS Group.
Entity_and_Attribute_Detail_Citation: Wupatki Vegetation Mapping Project Final Report (DOI - USGS/USBR)

Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USGS-NPS Vegetation Mapping Program Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address: U.S. Geological Survey, Center for Biological Informatics, MS 302, Room 8000, Building 810, Denver Federal Center
City: Denver
State_or_Province: Colorado
Postal_Code: 80225
Country: USA
Contact_Voice_Telephone: (303) 202-4220
Contact_Facsimile_Telephone: (303) 202-4219
Contact_Electronic_Mail_Address: gs-b-npsveg@usgs.gov
Resource_Description: Downloadable Data
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Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: HTML
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: http://biology.usgs.gov/npsveg/wupa/index.html#geospatial_veg_info
Fees: none

Metadata_Reference_Information:
Metadata_Date: 20040211
Metadata_Review_Date: 20060908
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USGS-NPS Vegetation Mapping Program Coordinator
Contact_Address:
Address_Type: mailing and physical address
Address:
U.S. Geological Survey, Center for Biological Informatics, MS 302,
Room 8000, Building 810, Denver Federal Center
City: Denver
State_or_Province: Colorado
Postal_Code: 80225

Country: USA
Contact_Voice_Telephone: (303) 202-4220
Contact_Facsimile_Telephone: (303) 202-4219
Contact_Electronic_Mail_Address: gs-b-npsveg@usgs.gov
Metadata_Standard_Name: FGDC-STD-001.1-1999 Content Standard for Digital Geospatial Metadata, 1998 Part 1: Biological Data Profile, 1999
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Extensions:
Online_Linkage: http://biology.usgs.gov/fgdc.bio/bionwext.txt
Profile_Name: Biological Data Profile FGDC-STD-001.1-1999